

paths. In turn the reduced number of circuits reduces equipment, line, and maintenance costs.

Where possible, MFSNT will assist NYSTA in provisioning switched 56 Kbps DDS circuits with the LEC. Not all LECs offer this service, or provide it out of their closest central office. Where this service is not available, MFSNT will place NYSTA dedicated circuits between the toll barrier/plaza and the closest LEC Central Office or IXC's POP.

MFSNT will provide Data Service Units (DSU's) which will respond when the primary network fails. In the event of a circuit failure, the Data Service Unit, CSU/DSU MT134A-R2, manufactured by Black Box, detects a Loss Of Signal (LOS) and switches to its backup mode. The MT134A-R2 DSU supports two DDS lines — one dedicated, and one switched. When LOS is detected, the DSU dials out a pre-programmed number (#56 + 1 + 10 Digits - for the NYNEX area) over the backup port. The IXC then switches the dialed circuit to one of the Albany DSUs. These DSUs will be placed in the same hunt group, to support occasions of more than one site failure.

MFSNT selected the MT134A-R2 DSU for its ability to function as a standalone 4-wire Integrated Service Unit. This unit has a front panel LCD for easy programming. RS-232 and V.35 ports are available. This DSU operates at speeds from 2.4 to 64 Kbps.

2.0 Network Operation and Maintenance

MFSNT provides operation and maintenance services on the fiber optic backbone and associated hardware and software. Operation and maintenance is provided for the length of the contract issued by NYSTA.

Operation and maintenance organization implementation requires capital purchases and/or long term lease or subcontract agreements on the following:

- Central office/warehouse in the Syracuse area.
- Offices in the Buffalo and Albany areas.
- Furniture, office machines, computers, and supplies.
- Various manufacturer-certified training courses.
- Spare parts stored centrally and/or staged at strategic locations.
- Testing and repair equipment and tools.
- Vehicles and related safety equipment.

2.1 Nature of Maintenance to be Performed

MFSNT provides a very modern, efficient maintenance approach which emphasizes proactive Preventive Maintenance (PM). We use historical data to perform Predictive Maintenance (PdM) on the telecommunications electronics for the regional hub sites. We respond to corrective calls in the field with trained, equipped technicians. We

place these technicians at strategic points to allow them to respond quickly, while also affording efficiency.

Our maintenance service provides a comprehensive package. MFSNT maintains fiber optic backbone cables for the length of the contract period, excluding cable locating services, which are provided by NYSTA. We repair damage to this cable from cable cuts, defects in the glass or sheath, rodent damage, and weather related damage.

MFS Network Technologies

Project Cost Worksheet

for

New York Thruway Authority

Project Totals

Item	Manufacturer	Description	Product Number	Total Qty
1.00		Connector Panel		
1.01	Telect	Fiber Distribution Panel 12F	015-2330-0000	113
1.02	Telect	Fiber Distribution Panel 24F	015-2430-0000	18
1.03	Telect	Bare Fiber Fusion Holder	015-0000-0901	149
1.04	Telect	Blank Connector Panel	015-0000-9000	139
1.05	Telect	Connector Panel Drilled FC	015-0000-2000	158
1.06	Telect	Connector Sleeve FC	018044	948
1.07	Telect	Jumper FC-FC 3M SM	502-0202-003	730
1.08				
1.09	Telect	DSX-1 4000 Series 84 Pos.	010-0000-4011	72
1.10	Telect	DSX-1 4000 Series Module	010-4004-0000	196
1.11				
2.00	Tellabs	Titan 5300 DCS		
2.01	Tellabs	DCS 16 Port	530-1	
2.02	Tellabs	DCS 32 Port	530-2	
2.03	Tellabs	DSC 64 Port	530-4	1
2.04	Tellabs	TITAN 530 Feature Package	530FP2	1
2.05	Tellabs	T1 Interface Module	5310	27
2.06	Tellabs	Rack Alarm & Power Distribution	82110	1
2.07	Tellabs	Relay Rack 7' x 19"	14.9703	1
2.08	Tellabs	Guard Rails - 19"	14.9964	2
2.09	Tellabs	Assembly, Wire & Test		1
2.10				
3.00	Fujitsu	FLM-150		
3.01	Fujitsu	FLM-150 Shelf	Shelf	23
3.02	Fujitsu	IR 1310nm OC-3 Optics, FC	HC1A-3MR1	4
3.03	Fujitsu	LR 1310nm OC-3 Optics, FC	HC1A-3LR1	38
3.04	Fujitsu	Middle Speed Muldem DS1/	MC1A-MDM1	43
3.05	Fujitsu	Low Speed 4 x DS1	LC1A-D1	25
3.06	Fujitsu	Low Speed DS1/OVTG	LC1A-F6	36
3.07	Fujitsu	High Speed Sw Overhead Ac	HS1A-AD1	23
3.08	Fujitsu	Low Speed Sw DS1/OVTG	LS1A-D1	43
3.09	Fujitsu	Time-Slot Assignment	TS1A-BSC	20
3.10	Fujitsu	Timing Control	TCA	23
3.11	Fujitsu	Micro Processor	MP1A-V2	23
3.12	Fujitsu	Alarm Interface	AW1A-BSC	23
3.13	Fujitsu	Supervisory Interface TL1/X.25	SV1A-TL2	23
3.14	Fujitsu	EOC Processor	EC1A	18
3.15	Fujitsu	Power Supply	PW1A	23
3.16	Fujitsu	Universal Fiber Tray	HA15B-0001-8126	23
3.17	Fujitsu	OVTG Fiber Tray	HA15L-0001-8147	18

Exhibit A

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MFS Network Technologies
Project Cost Worksheet
for
New York Thruway Authority

Project Totals

Item	Manufacturer	Description	Product Number	Total Qty
3.18	Fujitsu	FLEXR	FLEXR	4
3.19	Fujitsu	FLEXR Plus	FLEXR Plus	1
3.20	Fujitsu	FLM-6		
3.21	Fujitsu	Modular Shelf	Shelf	48
3.22	Fujitsu	OVTG 1310nm, FC	OVTG	48
3.23	Fujitsu	Low Speed 4 x DS1	LC1A-D1	48
3.24	Fujitsu	Microprocessor & Alarm Inte	MPU & ALM	48
3.25	Fujitsu	19" Rack Adapter	HA230-0001-V029	45
3.26	Fujitsu	FLEXR-6	SP06TR05-I01	5
3.27				
4.00	Coastcom	Channel Bank		
4.01	Coastcom	D/I Mux III 8-Slot Shelf	355-81011	61
4.02	Coastcom	Shelf 19"	91319-308	
4.03	Coastcom	Common Control Unit	30305-108	
4.04	Coastcom	Line Interface A	30309-114	
4.05	Coastcom	Line Interface B	30309-104	
4.06	Coastcom	Strobe Generator Unit	30307-104	
4.07	Coastcom	Blank Panel	30339-101	
4.08	Coastcom	Dual DSX-1 Interface - 150'	30118-101	
4.09	Coastcom	Power Unit -48VDC	30338-102	
4.10	Coastcom	OCUDP	30358-106	61
4.11	Coastcom	Dual 4-wire E&M	33245-103	39
4.12	Coastcom	Dual 2-wire FXS	33242-104	
4.13	Coastcom	10 Watt Ring Generator	30034-003	
4.14	Coastcom	pSDM Async RS232 Data	30355-106	6
4.15	Coastcom	SDM Connector Shelf	30360-101	6
4.16	Coastcom	D/I Mux III 24-Slot Shelf	353-81011	6
4.17	Coastcom	Shelf 19"	91619-324	
4.18	Coastcom	Common Control Unit	30305-108	
4.19	Coastcom	Line Interface A	30309-114	
4.20	Coastcom	Line Interface B	30309-104	
4.21	Coastcom	Strobe Generator Unit	30307-104	
4.22	Coastcom	Blank Panel	30339-101	
4.23	Coastcom	Dual DSX-1 Interface - 150'	30118-101	
4.24	Coastcom	Power Unit -48VDC	30338-102	
4.25	Coastcom	NCC Plus Software	0610-0305	1
5.00		Rectifier & Batteries		
5.01	PCP	PS 19" Mounting Shelf	PS 19	65
5.02	PCP	Rectifier -48VDC/7.5 Amp	MOD 4875	130
5.03	PCP	Mini Load Center w/ Breaker	MDM-48-75	65
5.04	PCP	Relay Rack 19" x 7"	R-19-7-3	65

Exhibit A

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MFS Network Technologies
Project Cost Worksheet
for
New York Thruway Authority

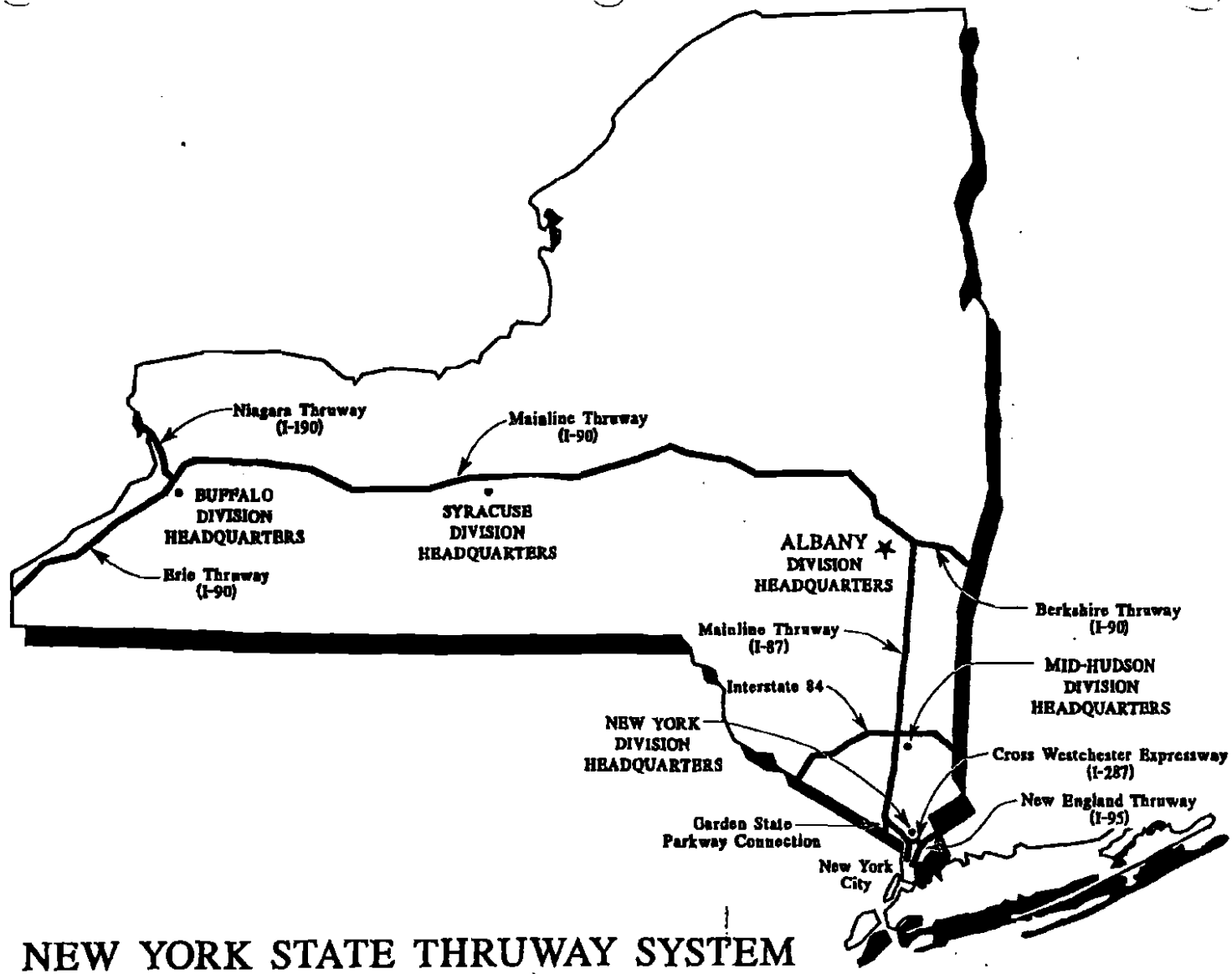
Project Totals

Item	Manufacturer	Description	Product Number	Total Qty
5.05	PCP	Battery Tray 15" x 28"		65
5.06	PRC	Batteries 15 Amps	PRC 1235	260
5.07	PCP	PS 19" Mounting Shelf	PS 19	2
5.08	PCP	Rectifier -48VDC/7.5 Amp	MOD 4875	4
5.09	PCP	Mini Load Center w/ Breaker	MDM-48-75	1
5.10	PCP	Relay Rack 19" x 7"	R-19-7-3	1
5.11	PCP	Battery Tray 15" x 28"		1
5.12	PRC	Batteries 30 Amps	PRC 1265	4
5.13				
6.00		Misc.		
6.01	Saunders	Relay Rack 19" x 7"	S8-556-084-XU	115
6.02	Metal-Tech	Relay Rack 23" x 7"	RR7-0-23	22
6.03	Saunders	RR Ground Assemble 19"	S8-579-04	115
6.04	Saunders	RR Ground Assemble 23"	S8-579-04	22
6.05	Saunders	RR Mounting Kit	S8-2133-12	137
6.06	Saunders	Bracket, Cable Tie	S8-580	822
6.07	Saunders	Ladder Rack 10'	S8-17-12-GR	137
6.08	Graybar	Black Stranded #6 AWG	THHN6STRBLK	964
6.09	Graybar	Red Stranded #6 AWG	THHN6STRRED	964
6.10	Graybar	Orange Stranded #6 AWG	THHN6STRORN	964
6.11	Graybar	Black Stranded #14 AWG	THHN14STRBLK	1,260
6.12	Graybar	Red Stranded #14 AWG	THHN14STRRED	1,260
6.13	AT&T	30 PR ABAM #22 AWG	106556640	385
6.14	AT&T	6 PR ABAM #24 AWG	105412696	1,470
6.15	Panduit	Cable Ties		2,250
6.16	Hendry	Fuse Panel		72
6.17	Hendry	GMT Fuses 5.0 AMP		476
6.18	Blackbox	56 Kbps DSU Ded/SW56	MT134A-R2	81
6.19	Larus	Stratum 3E Timing System		1
6.20	Black Box	RS-232 Data Cable 10'	SM-ECN25C	142
6.21	Pioneer	Computer Pent. 66 MHz	FR-781AA-NJ	1
6.22	Pioneer	17" Color Monitor	FR-PCXAV-EC	1
6.23	Pioneer	Video Bus Adapter	FR-PCXAG-AL	1
6.24	Pioneer	24-pin Printer	LA65-CA	1
6.25	Pioneer	HiNote 450DX2 Notebook	FR-P62WC-AA	5
6.26	Industrial Co	32 Port RS-232 Card	Rocketport32	1
6.27	Industrial Co	16 Port RS-232 Panel	PRE16-232	2
6.28				
6.29		Misc.		131

Exhibit A

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NEW YORK STATE THRUWAY SYSTEM

EXHIBIT C
SEGMENTS

<u>SEGMENT NUMBER</u>	<u>MILEPOSTS</u>		<u>DESCRIPTION</u>
1	NE 0.00	- NE 15.01	NEW ENGLAND SECTION INTERSTATE 95: EXIT 8 - EXIT 22 AND CONN. STATE LINE
2	CW 0.00	- CW 10.83	CROSS WESTCHESTER EXPRESSWAY, INTERSTATE 287 ONLY
3	0.00	- 36.54	INTERSTATE 84 WEST OF INTERSTATE 87
4	36.54	- 71.46	INTERSTATE 84 EAST OF INTERSTATE 87
5	0.00	- 141.92	MAINLINE INTERSTATE 87; EXIT 1 - EXIT 23
6	B 0.00	- B 24.28	BERKSHIRE SECTION: INTERSTATE 90
7	141.92	- 182.17	INTERSTATE 90: EXIT 23 - EXIT 28
8	182.17	- 232.85	INTERSTATE 90: EXIT 28 - EXIT 31
9	232.85	- 282.93	INTERSTATE 90: EXIT 31 - EXIT 36
10	282.93	- 362.44	INTERSTATE 90: EXIT 36 - EXIT 46
11	362.44	- 444.87	INTERSTATE 90: EXIT 46 - EXIT 57A - EDEN-ANGOLA
12	N 0.00	- N 21.20	NIAGARA SECTION-INTERSTATE 190
13	444.87	- 496.00	EXIT 57A - EDEN-ANGOLA - PA STATE LINE

Exhibit D

TARGET REVENUE THRESHOLD EXPLANATION

Construction:

Once It is determined by both the New York State Thruway Authority (Authority) and MFS Network Technologies, Inc. (MFSNT) that the anticipated User Fees meet and/or exceed the Target Revenue Threshold for any given Segment, as described below, MFSNT shall proceed to construct that Segment of the Facilities, NYS Fibers and Authority Telesystem.

Target Revenue Threshold:

The Target Revenue Threshold (Target) shall be calculated prior to construction of a given segment by taking the principal and interest payments on the debt (i.e. debt service) and adding an amount sufficient to cover 100% of the estimated yearly operating expenses (i.e. maintenance, marketing, taxes, insurance, etc...) and an additional amount equal to twenty percent of the anticipated User Fees, which percentage shall be the Authority's share of the revenue. Any actual costs that exceed the estimates shall be the responsibility of MFSNT. The Target shall be the amount of revenue needed to generate a year end cash balance for MFSNT of at least \$0.00 for this project. In no event will any amounts received by MFSNT from the State be considered to be User Fees or Gross Revenue, except that MFSNT may use anticipated installation payments from the State for the NYS Fibers in calculating the Target Revenue Threshold. These amounts will under no circumstances be payable or due as compensation to the Authority.



EXHIBIT E

SCOPE OF WORK

MFSNT will provide the design, construction, marketing and maintenance/operation of a Fiber Optic Infrastructure containing a four-duct conduit system throughout the Rights of Way of the New York State Thruway Authority, as described in the MFSNT Technical Proposal (Exhibit F) and in the Authority's Request for Proposals.

Machine trenching, rock sawing, right-of-way clearing, road and highway bores, directional boring and handhole installations to accommodate cable placement, cable splicing, terminating and testing, building penetrations and telecommunications electronics installation at Authority sites, will be included as part of the construction process to be completed by MFSNT. Restoration to pre-construction condition, approved in advance by the Authority, will be provided by MFSNT.

The four-duct system will consist of one (1) buried four-inch conduit along the entire length of the Thruway. Four (4) one-inch innerducts will be placed inside the four-inch conduit to allow extended use of the infrastructure without additional construction activity disturbances. A warning ribbon will be placed twelve (12) inches below the surface of the ground and directly above the conduit. The purpose of the warning ribbon will be to alert excavators to the fiber cable lying below. Fiber Optic Cable warning signs will be placed in accordance with normal industry standards along the cable route, at roadway transitions and at locations prone to excavation/construction activities.

A minimum seventy-two (72) strand fiber optic cable will be placed in one of the four innerducts by MFSNT. The fiber optic cable will be installed, fusion spliced, terminated and tested end-to-end. Sixteen (16) fibers of this seventy-two (72) fiber cable will be used as the transport medium for the Authority Telesystem. Eight (8) fibers will be available for sale to the New York State Office of General Services for New York State government telecommunications applications. Unused fibers in this cable will be reserved for the exclusive use by MFSNT for providing dark fiber leases to third parties.

MFSNT and the Authority will reevaluate the network traffic configuration and projected network growth during the tenth year after construction of any Segment to determine if additional fiber capacity would have a measurable benefit to the Authority in meeting its telecommunications needs. MFSNT will make available up to an additional eight (8) fibers for the Authority's use and will maintain/operate the additional fibers in conjunction with the Authority Telesystem. Installation and maintenance/operation will be provided to the Authority at no charge.



The installation of the Fiber Optic Infrastructure will be provided by MFSNT as described in the Technical Proposal (Exhibit F). Installation of the fiber optic cable system, and implementation and operation of an OC-3 and 6 Mbps SONET transmission system linking the Authority sites as required in the Authority's Request for Proposals, (see Exhibit A, Authority Telesystem) is included. MFSNT will conduct an analysis of the traffic capacity of the Authority Telesystem during the third year after construction commences on any network Segment to determine if an upgrade to OC-12 is needed. If after this analysis, MFSNT and the Authority agree that an upgrade is necessary, MFSNT will make the necessary changes to provide OC-12 by the end of the fifth year of operation of the Segment.

As further described in the MFSNT Technical Proposal, MFSNT will provide a comprehensive maintenance/operation approach stressing Preventative Maintenance (PM). MFSNT will provide a complete turn key maintenance/operation function, excepting cable locating services will be provided by the Authority. MFSNT will maintain fiber optic backbone cables for the length of the contract period. Damages to the cable from cable cuts, defects in the glass or sheath, rodent damage and weather related problems will be repaired. From preventative maintenance in the form of general housekeeping, to complete system restoration in the event of a network failure, MFSNT will provide complete network maintenance and operation. Response times in the event of failures shall be in accordance with Section 6.6 of the MFSNT Technical Proposal, including four (4) hours or less for major failures, twenty four (24) hours for minor/service affecting failures, and seventy two (72) hours for minor/non-service affecting failures.



EXHIBIT F

**MFSNT Technical Proposal for the Design, Installation,
Operation and Maintenance of a Fiber
Optic Infrastructure Along the Thruway/Canals
Rights of Way**

Included under separate cover



PART 133

ACCOMMODATION PLAN FOR LONGITUDINAL USE
OF FREEWAY RIGHT-OF-WAY BY UTILITIES

(Statutory authority: Highway Law §10)

Sec.

- 133.0 Freeway Installations
- 133.1 General Policy
- 133.2 Application Process

Sec.

- 133.3 Contract Award
- 133.4 Contract Provisions

Section 133.0 Freeway Installations. (a) With the exception of fiber optics facilities owned by transportation corporations defined in Article 3 of the Transportation Corporations Law and designated as public utilities by the Public Service Commission, the longitudinal use of freeways by utilities shall not be allowed except in accordance with Section 131.6 of this Title.

(b) Fiber optics facilities which are owned by transportation corporations designated as a public utility shall, with the Commissioner's approval, be allowed the longitudinal use of freeway rights-of-way. Such use will be permitted under a "Class Approval" as provided by 23 CFR §645.209, and in accordance with the provisions in this Part. These regulations shall apply to freeways under the jurisdiction of this Department, and to freeways under the jurisdiction of public authorities, public benefit corporation and municipalities to the extent that such entity has not adopted its own regulations. A copy of any agreement between the Commissioner and any responsible local officials, public authorities and/or public benefit corporations concerning the applicability of this (or other) utility accommodation plan to Federally-aided freeways not under the Department's jurisdiction and control shall be provided to the Federal Highway Administration. Such agreement shall insure that the utility accommodation policies of the public authority, public benefit corporation or municipality provide at least the same measure of protection as provided by Part 131.

133.1 General Policy. (a) The Department will make available the rights-of-way of freeways for the installation of fiber optics facilities where they can be safely installed, operated, and maintained. For purposes of this plan install, operate and maintain shall include but not be limited to: construction, service, repair, replacement, inspection, etc.

(b) Transportation corporations interested in using portions of the right-of-way of a freeway for longitudinal installations of fiber optics facilities are encouraged to make their general interest known. Expressions of interest should be directed to the Director, Real Estate Division, Building 5, State Office Campus, New York State Department of Transportation, Albany, New York 12232.

133.2 Application Process. (a) Where there is a reasonable

expectation of interest by transportation corporations in the installation of fiber optics facilities within a portion of the right-of-way of a freeway, as evidenced by expressions of interest received by the Department and excess fiber optics capacity installed in the freeway right-of-way is not already available from another source, the Department will offer the right to install, operate, and maintain fiber optics facilities within the right-of-way of specific portions of freeways through an open competitive process which involves advertisement, evaluation of proposals from responsible transportation corporations, negotiation of an agreement with a selected proposer, and award of a contract.

(b) Request for Proposals. The Department will advertise in the State Register and in periodicals normally used for such purposes, a request for proposals from responsible transportation corporations for the installation, operation, and maintenance of fiber optics facilities within the right-of-way of specified portions of freeways. Although requirements may vary between locations in some respects, each proposal will be required to include:

- (1) a plan and schedule for initial installation, including a traffic control plan in conformance with the Manual of Uniform Traffic Control Devices (MUTCD);
- (2) a plan for access to the fiber optic facilities for operation and maintenance including traffic control plans in conformance with the MUTCD;
- (3) the capacity of the facilities proposed to be provided and an analysis that shows how projected demand will be served by the proposed installed capacity;
- (4) a statement of the degree to which facilities, such as duct space, will be available, if at all, for the use of others and the terms and conditions of such use; and
- (5) the proposed payment to be made for occupancy of the freeway rights-of-way.

(c) Review and Evaluation of Proposals. Review and evaluation of proposals will be by committee in accordance with criteria specified in the Request for Proposals. The committee will be composed of the following members of the Department or their designees: Assistant Commissioner, Office of Operations; Assistant Commissioner and Chief Engineer, Office of Engineering; and Assistant Commissioner, Office of Public Transportation. The committee will consult with the Public Service Commission and the Department of Economic Development in evaluating proposals. The criteria for evaluation will include:

- (1) The relative degree of disruption of the right-of-way during installation as shown in plans and schedules and the extent to which such disruption will affect traffic flow and safety, landscaping, and protected resources, as well as the freeway's appearance, its structural and controlled access integrity and its ability to be maintained, widened or otherwise modified. To



minimize the disruption of the right-of-way during installation, all proposals must be in accordance with the following guidelines:

(a) All elements of a fiber optics facility are to be installed in a designated "utility strip" to be established by the Department. The utility strip shall be approximately 10 feet wide and shall generally be established along the edge of the right-of-way. The utility strip shall fall within the edge of the right-of-way and the "roadway". Roadway is defined in the Department's design manual as "that portion of the highway included between the outside edges of the graded width of shoulder". Except as hereinafter provided, no part of a fiber optics facility installation shall be placed within the through roadway or directly through any interchange area. The Department may authorize installation within the roadway in exceptional situations (e.g., to provide access to a bridge which is needed to carry the fiber optics facilities over natural barriers). The location of the fiber optics facilities shall be such as to minimize impact on highway use, safety, maintenance, aesthetics, and future highway improvements.

(b) Except as provided elsewhere in this document, fiber optics facilities shall be installed in underground ducts or conduits and no part of the fiber optics facility shall be visible above ground.

(c) The initial installation shall include all appurtenances necessary or incidental to the operation of the fiber optics facility, and shall include manholes or other duct/conduit access points at appropriate spacings to permit the pulling of additional cables into the duct system without further excavation. Repeater/Booster stations shall generally be located off the freeway right of way. Installation of Repeater/Booster stations on the ROW will be allowed only when the applicant can clearly demonstrate that it is impracticable to locate elsewhere. Any electrical service necessary to operate repeater/booster stations or similar appurtenances shall be placed in underground ducts or conduits running from crossroads or frontage roads adjacent to the required point of access or from easements the utility owns. No longitudinal electrical line installation on the freeway right-of-way will be allowed. The transportation corporation shall furnish and pay for all materials, equipment, and labor required for the proposed installation.

(d) Installations of any part of a fiber optics facility crossing the freeway shall be underground and shall be installed in a manner so as to virtually preclude any necessity for disturbing the roadways for installation, operation or maintenance. To the extent feasible and practicable, such crossings should be on a line generally

normal to the freeway alignment.

(e) At bridge crossings or where unusual terrain, environmental, or other conditions warrant, the Department may authorize installation of a portion of the fiber optics facility above ground, or under conditions which differ from those specified in this Plan, if it is found that there is no practicable alternative inside or outside of the right-of-way and that the installation will not impair freeway safety or the aesthetic quality of the land traversed. However, no above ground facility that constitutes a fixed object will be allowed within the clear zone, nor will installation be allowed within the median.

(f) Where a fiber optics facility installation must cross a major valley or river, such installation may be carried on an existing freeway structure only where the Department finds that such use of the structure will not interfere with the use or maintenance of the freeway and that denial of such use would result in significant harm to the environment. Similarly, such installation shall not be allowed to occupy vehicular tunnels without such a finding by the Department.

(g) In scenic areas, the Department may authorize installations only when they do not require extensive alterations of trees or terrain features visible to the highway user or impair the aesthetic quality of the land traversed. When installation of a fiber optics facility is authorized, trees within nine feet of the center line of the designated fiber optics facility area within the freeway right-of-way may be removed. This area may be kept clear of trees during the period of its use and occupancy by the fiber optics facility.

(h) All methods of installation, as well as methods of erosion control and other details of installation of the facility, shall be subject to the review and approval of the Department.

(i) Upon completion of installation, all disturbed areas shall be returned to their original topography and all steps necessary to prevent future erosion shall be taken. Backfill shall be tamped and vegetation, other than trees, replaced. The Department may specify the type and location of replacement vegetation. The Department may require the completion by the selected proposer of an approved mitigation plan for replacement of tree loss created by the construction of the fiber optics facility. The survival of all replacement trees and vegetation for a period of two (2) years following planting shall be guaranteed.

(j) Longitudinal occupancy of freeway rights-of-way shall,

be for transmission type facilities only. Service connections to adjacent properties will not be allowed from the freeway rights-of-way, including service connections at repeater/booster stations located on the freeway right-of-way.

(k) The proposal shall take into account planned or likely improvements or alterations in the nature or configuration of the highway and planned or likely improvements in the nature or configuration of fiber optics facilities.

(l) The proposal shall also identify the direct and indirect environmental and economic effects of the loss of productive agricultural land or the productivity of any agricultural land which would result if the facility is not located within the freeway right-of-way. It shall also identify the potential impact upon freeway landscaping.


(m) Safety of the driving public and protection of the State rights-of-way for future use are of primary importance in allowing longitudinal occupancy by any fiber optics facility. In no case will occupancy or access be permitted that will adversely affect safety.

(2) Measures to be taken to provide access to fiber optics facilities from outside the right-of-way.

(a) To the greatest extent possible in light of the locations designated for the fiber optics facility, access for installing, operating or maintaining a fiber optics facility along or across a freeway should be limited to access via nearby frontage roads (where available), adjacent public roads and streets, or trails along or near but outside of the freeway right-of-way line, connecting only to an intersecting road, from any one or all of which entry may be made to the outer portion of the right-of-way.

(b) A locked gate along the freeway control-of-access fence may be utilized to meet periodic access needs. Where a gate is allowed, the use and occupancy permit shall include adequate provision against unauthorized use.

(c) The Department shall impose conditions for policing and other controls as are necessary to assure the safety of highway travelers and to avoid interference with freeway use. During installation, operation and maintenance, barriers and/or signs and/or other warning devices conforming to the MUTCD shall be installed as required and approved by the Department to alert and protect highway travelers to utility activities within the right-of-way. Where signs conforming to the MUTCD are placed in the vicinity of the through roadway or clear recovery area, they shall be collapsible upon impact from a vehicle. At no time



will parking/placement of vehicles, equipment or materials be allowed on the shoulders or within the clear zone without the expressed permission of the Department. Additional maintenance and protection provisions shall be as stated in the "general conditions" clauses of the Highway Work Permit (Form PERM 41-1d). The Department reserves the right to require more stringent measures when it deems it necessary, as provided by Sections 126, 128, 129, 130 of this Title 17.

(d) Lane closures on the mainline or ramps of the freeway will not be permitted during the installation, operation, or maintenance of fiber optics facilities.

(e) Access to fiber optics facilities for installation, operation and maintenance within a freeway right-of-way will only be allowed in accordance with the provisions of a traffic control plan which is specified in the negotiated contract.

(3) The total capacity being installed. Installation of fiber optics facilities shall be of a character and capacity to preclude the programmed need for any additional disruption. Absent compelling circumstances, the Department will not permit installation of additional ducts or conduits for a minimum of 10 years from initial construction. The Department will, however, allow installation of additional cable and/or replacement of existing cable within a previously installed duct or conduit to the extent it can be accomplished without direct or indirect interference with freeway traffic.

(4) The degree to which facilities, such as duct space, will be available, if at all, for use by others and the proposed terms and conditions of such use.

There is a presumption that it is in the public interest for the competing transportation corporations to provide service within the available corridors. In order to protect and encourage such competition and ensure minimum future intrusion into the right-of-way and to avoid disturbance to traffic by installation of multiple fiber optics facilities, the proposer is required to provide a description of the facilities, such as duct space, which will be available to others and how others will be provided access to the facilities proposed to be installed, if any. An outline of the terms and conditions under which the proposer would make such facilities available to other services shall be provided.

(5) Proposed payment or payments to be made for use and occupancy of the freeway right-of-way.

The Department may charge an assessment for the privilege of permitting installation of fiber optics facilities and using the freeway right-of-way.



133.3 Contract Award. Award of a contract to a selected proposer in accordance with the general terms outlined in the proposal will usually be made within 90 days of the deadline for receipt of a complete proposal by the Department. Contract awards are subject to the negotiation of an acceptable contract and approval by Department Counsel, after consultation with the Division of the Budget, the Attorney General, and the Comptroller.

133.4 Contract Provisions. Contracts may vary but will generally include the following provisions: (a) The Department reserves the right to restrict the use of freeway right-of-way. Such restrictions may include but not be limited to: number and types of fiber optics facilities allowed; physical space occupied by the fiber optics facilities or by equipment used for installation, operation and maintenance; time restrictions on installation, operation or maintenance; provisions of a traffic control plan for the maintenance and protection of traffic; system expansion, etc. The selected proposer may be required to make installations concurrent with others, so as to limit such work to one installation operation.

(b) Except where payment is required by Section 10, Subsection 24-b of the Highway Law, any relocation of any fiber optics facility allowed to be on the freeway right-of-way, made necessary as a result of highway construction or maintenance operations, or changes in Department policy or design standards, shall be made promptly and at the expense of the selected proposer.

(c) The use of the freeway right-of-way shall be by a "Use and Occupancy Permit" or other similar agreement obtained from the Department. Such Permit will require that a "Highway Work Permit" be obtained prior to actual installation. In addition an "Annual Maintenance Permit" must first be secured prior to the undertaking of any maintenance activity on the right-of-way. A Department approved traffic control plan for installation, operation and for future access is a prerequisite to issuance. Application and general conditions for such "Highway Work Permit" and "Annual Maintenance Permit" are explained in Title 17 Part 131 of this Title.

(d) No permit to allow installation of a fiber optics facility on freeway right-of-way will be issued nor will work commence until a contract is awarded to a selected proposer.

(e) Violation of the "Use and Occupancy Permit", "Highway Work Permit", "Annual Maintenance Permit", or of any other law or rule at any time by the permit holder or its agent(s) in the installation, operation or maintenance of fiber optics facilities within freeway rights-of-way shall be the basis for denial of use, imposition of fines, or physical removal of the offending party and/or the permit holder's facilities as designated in such permit, or as provided by law.

(f) The permit holder shall be responsible for obtaining all necessary permits, approvals, etc. required by any Federal agency or other State agency and shall furnish to the Department copies of such permits and approvals.

(g) Being permitted to use freeway rights-of-way does not automatically mean permission to use bridges. Any proposed use of bridges must be evaluated and approved by the Department's Structures Division as per Section 131.14 and 136.15 of this Title. Any desire to install fiber optics facilities on bridges or other structures must be stated in the initial application for any permit, together with whatever installation details the Department indicates are necessary to evaluate the proposal.

(h) The selected proposer shall be required under the Highway Work Permit to provide the Department with a log of each entrance onto the freeway rights-of-way with personnel and/or equipment to include date, time, duration, location of entrance onto and exit from the rights-of-way, and the reasons for such entrance and exit, the equipment and personnel involved, etc.

(i) The selected proposer shall install along with any buried conduits or ducts a system of continuous plastic ribbon or marking tape. Such marker shall be installed at a level no less than 12 inches below the surface of the ground. The marker shall include a metal thread or other system capable of reliably emitting a signal readable by locator equipment operated on the surface. The selected proposer also shall install adequate permanent buried cable markers, showing the approximate horizontal and vertical location of its underground fiber optics facility. Such post markers shall not interfere with highway operations or maintenance and shall be offset from the actual location of the fiber optics facility where necessary to avoid such interference. The selected proposer shall also maintain records that describe the fiber optics facility, its location, depth, size, and other relevant data, which shall be available upon request to the Department and to other interested agencies. Within 120 days following the completion of the work authorized under a location permit, the selected proposer shall file with the Department one complete set of "as built" plans showing the locations of all parts of the fiber optics facility. The selected proposer also shall file with the Department at that time one complete set of said plans on microfiche or other form of information storage system as determined by the Department.

(j) Except where this Plan or the use and occupancy permit call for different procedures, the selected proposers shall comply with the construction standards, location standards, and special marking techniques established by the most recent publication of 23 CFR 645.

(k) The Department shall have authority to place inspectors on site to monitor and observe the selected proposer's activities, and/or to request the presence of state or local police to assure the safety of freeway travelers, at such times and for such periods as the Department deems appropriate. All costs thereof shall be borne by the selected proposer.

(l) Upon issuance of a permit and from time to time during any installation, operation, or maintenance periods, the selected proposer shall pay to the Department those amounts representing all of the costs of processing the application and administering the permit, including without limitation any costs relating to the need to relocate the fiber optics facility in connection with any other work performed by the Department.

(m) Acceptance of a permit by the selected proposer shall constitute an agreement by the selected proposer; notwithstanding any other provision of law, to assume all liability for any loss, cost, damage, or harm arising out of or relating to the installation, operation or maintenance, of its facility and to the presence of its facility in the freeway right-of-way. Further, acceptance of a use and occupancy permit shall constitute an agreement by the selected proposer to indemnify and hold harmless the State of New York, its officers, agents, and employees from all loss, cost, damage, and harm, including attorney's fees, arising out of or relating to the foregoing. Such indemnification agreement shall apply regardless of any negligence or fault on the part of the State of New York, its officers, agents, and employees.

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EXHIBIT H

DESIGN REQUIREMENTS

MFSNT shall provide all design services related to the Scope of Work, with the exception of the Authority's own internal design review, at its own cost and expense.

MFSNT shall ascertain the standard practices of the Authority prior to the execution of any of the work required by this Agreement. All work under this Agreement shall be performed in accordance with these standard practices, and all applicable Authority, State, Federal, local and other laws, rules, regulations, standards and all addenda to these materials.

All design documents and construction plans must be submitted for the Authority's review and approval, including but not limited to the following:

- Seventy-five percent (75%) complete detailed design plans, including maintenance and protection of traffic plans, and
- Final Construction documents, including detailed plans, specifications, and estimates.

The above documents and plans shall be approved by the Authority's Chief Engineer. The Authority Project Manager shall notify MFSNT of such approval, disapproval, or requirement for additional plan review in accordance with Article 4 of the Agreement.

Upon completion of any particular Segment of the Facilities or Authority Telesystem, MFSNT shall submit three (3) copies of each as-built plan and shall provide the Authority with AutoCad (.dxf) drawing files.



EXHIBIT I

SECURITY

MFSNT shall furnish to the Authority the following security for the faithful performance of all of the provisions of this Agreement. All bonds must be obtained from bonding companies authorized to do business in the State of New York.

- (A) **Construction Bonds.** MFSNT shall procure and deliver the following bonds to the Authority until final acceptance by the Authority of any construction required by this Agreement:
- (1) **Faithful Performance Bond.** A bond, in the form prescribed by the Authority, that MFSNT will perform the construction work in accordance with the terms of this Agreement and with the plans and specifications that are approved by the Authority, and that it will commence and complete such work within the time prescribed in this Agreement, which shall accord with the time prescribed by this Agreement, and that it will provide against any and all direct or indirect damages that may be suffered or claimed on account of such work during the time of this Agreement.
 - (2) **Labor and Material Bond.** A bond guaranteeing prompt payment of monies due all persons supplying MFSNT with labor and materials employed and used in carrying out this Agreement, which bond shall inure to the benefit of the persons supplying such labor and materials.
 - (3) **Amount of Bonds.** The amount of the Faithful Performance Bond and Labor and Material Bond shall be for the full amount invested by MFSNT in the Authority Telesystem and the Facilities.
- (B) **Maintenance/Operation and Compensation Bonds.** For the purpose of securing the faithful performance of Article 5 - Maintenance/Operation, and the timely payment of revenues due the Authority under Article 10 - Compensation, MFSNT shall furnish a financial guarantee bond in the amount of \$5 million prior to the time the first Segment becomes operational.

APPENDIX A

STANDARD CLAUSES FOR ALL NEW YORK STATE THRUWAY AUTHORITY CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the Thruway Authority, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. **NON-ASSIGNMENT CLAUSE.** This contract may not be assigned, and no part or portion may be subcontracted, by the Contractor nor may its right, title or interest therein be assigned, transferred, conveyed, sublet or otherwise disposed of without the previous consent, in writing, of the Authority and any attempts to assign the contract without the Authority's written consent are null and void.

2. **WORKERS' COMPENSATION BENEFITS.** This contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

3. **NON-DISCRIMINATION REQUIREMENTS.** In accordance with Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, disability or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, the Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate

against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50 per person per day for any violation of Section 22f or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

4. **WAGE AND HOURS PROVISIONS.** If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law.

5. **NON-COLLUSIVE BIDDING REQUIREMENT.** In accordance with Public Authorities Law Section 2878, if this contract was awarded based upon the submission of bids, Contractor warrants, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further warrants that at the time Contractor submitted its bid, an authorized responsible person executed and delivered to the Authority a non-collusive bidding certification on Contractor's behalf.

6. **INTERNATIONAL BOYCOTT PROHIBITION.** In accordance with Section 220-f of the Labor Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of this contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership, or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the Authority within five (5) business days of such conviction, determination or disposition of appeal.

7. **SET-OFF RIGHTS.** The Authority shall have rights of set-off. These rights shall include, but not be limited to, the Authority's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing by the contractor to the Authority with regard to this contract, or any other contract with the Authority including any contract for a term commencing prior to the term of this contract. This also includes amounts due and owing the Authority for any other reason including without limitation, monetary penalties, adjustments, fees, or claims for damages by the Authority and third parties in connection therewith.

8. **RECORD-KEEPING REQUIREMENT.** The Contractor shall establish and maintain complete and accurate books, records, documents, accounts or other evidence directly pertinent to performance under this contract for a period of six (6) years following final payment or to the termination of this contract, whichever is later, and any extensions thereto. The Authority and Attorney General or any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to such books, records, documents, accounts and other evidential material during the contract term, extensions thereof and said six (6) year period thereafter for purposes of inspection, auditing and copying. "Termination of this contract", as used in this clause 8, shall mean the later of completion of the work of the contract or the end date of the term stated in the contract.

9. **LIABILITY.** Except to the extent provided in Article 13 of this Agreement, Contractor shall be responsible for all damage to life and property due to negligent or otherwise tortious acts, errors or omissions of Contractor, in connection with their services under this contract. Further, it is expressly understood that Contractor shall indemnify and save harmless the Authority and/or the State of New York, as their interests may appear, from claims, suits, actions, damages, and costs of every name and description resulting from the negligent performance of the services of Contractor under this contract, and such indemnity shall not be limited by reasons of enumeration of any insurance coverage herein provided.

10. **GOVERNING LAW.** This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

11. **LATE PAYMENT.** Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Public Authorities Law Section 2880, and 21 NYCRR Part 109.

12. **NO ARBITRATION AND SERVICE OF PROCESS.** Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized) but must, instead, be heard in a court of competent jurisdiction of the State of New York. Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested.

13. **OBSERVANCE OF LAWS.** The Contractor agrees to observe all Federal, State and local laws and regulations and to procure all necessary licenses and permits.

14. **COMPTROLLER APPROVAL.** Unless otherwise provided by resolution of the Board of the Thruway Authority, if this contract involves expenditure of Thruway Authority funds in excess of \$5,000, this contract shall not be valid, effective or binding upon the Thruway Authority until it has been approved by the State Comptroller and filed in his office.

15. **CONFLICTING TERMS.** In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix, the terms of this Appendix shall control, except to the extent required for the purpose of obtaining Federal Aid in connection with this contract, any contract provisions required for Federal Aid projects shall supersede any conflicting provisions.

16. **ENTIRE AGREEMENT.** This contract, together with this Appendix, constitutes the entire understanding between the parties and there are no other oral or extrinsic understandings of any kind between the parties. This contract may not be changed or modified in any manner except by a subsequent writing, duly executed by the parties hereto. ■

APPENDIX B



OMNIBUS PROCUREMENT ACT OF 1992 BID PROPOSAL/CONTRACT REQUIREMENTS INSERTION CLAUSES

ALL AUTHORITY BIDS OR CONTRACTS

It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
One Commerce Plaza
Albany, New York 12245
Phone: (518) 474-7756
Fax: (518) 486-6416

A directory of minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Minority and Women's Business Development Division
One Commerce Plaza
Albany, New York 12245
Phone: (518) 474-6346
Fax: (518) 473-0666

A handwritten signature or mark, possibly a stylized "S" or "G", located in the bottom right corner of the page.